ABSTRACT OF THE DISCLOSURE

A metered fluid pump for a non-contact tonometer comprises a piston and a cylinder configured such that a plenum chamber defined thereby develops a massive leak through an exhaust port at a predetermined displacement position of the piston relative to the cylinder, thus reducing unnecessary impulse energy delivered to the eye that is a source of patient discomfort. A metering adjustment drive is provided for adjusting the piston and cylinder in a relative manner to meter the volume of fluid delivered before the leak develops, such that a suitable fluid pulse can be delivered to the eye.